

Notice of Allowability

Application No.

10/090,802

Examiner

Ana M. Fortuna

Applicant(s)

MAARTENS ET AL.

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/16/06.
2. ☒ The allowed claim(s) is/are 1,4,5,8-11,15,17-27,30,31 and 33-45.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 8/14/06.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other See Continuation Sheet.

Continuation of Attachment(s) 9. Other: Figure drawings filed on 3/6/02 are approved.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Tipton D. Jennings on 8/14 and 8/21, 2006.

The application has been amended as follows:

In claim 10, line 2, delete "spacer means", and insert - -spacers- -.

In claim 11 line 2, and line 5, delete "spacer means", and insert - -spacers-

-.

In claim 15, line 1, delete "14", and insert - -1- -.

In claim 18, line 2, after "membrane", insert - - and- -, and in line 3, delete "as well as" and delete the term

"the regulating means being adapted to permit repeatable or standard conditions, such as a constant cross fluid velocity and fluid pressure"

In claim 21, line 3, after "outlet", insert - - for passing fluid through the test membrane- -.

In claim 23, line 2, delete "monitoring unit is operatively associated with", and insert - -pumping means is- -.

In claim 25, line 2, delete "manifold unit includes", and insert - -manifold is- -.

In claim 30, line 3, delete "conventional"; in line 4 delete "spacer means", and insert - -spacers- -.

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Amend claim 33.

33. (Currently amended) The monitoring unit according to claim 1 wherein the semi-permeable membrane is a spiral reverse osmosis membrane and the monitoring unit is adapted for monitoring fouling of the spiral membrane in the [a semi-permeable spiral membrane in a spiral reverse osmosis] water purification system [and], the monitoring unit is located intermediate a feed fluid tank and [a] the spiral membrane [plant of the spiral reverse osmosis water purification system].

34. (Currently amended) A method of monitoring fouling of a semi-permeable membrane in a water purification system, the method comprising the steps of: providing in line with the water purification system, intermediate a feed fluid tank an a membrane plant, a monitoring unit;

[a] the monitoring unit comprising a flow chamber having an inlet for permitting ingress of a feed fluid into the flow chamber, at least one fluid outlet arranged in fluid communication with the flow chamber, at least one fluid outlet arranged in fluid communication with the flow chamber for permitting egress of the of fluid from the monitoring unit after having passed through a semi-permeable test membrane provided within the chamber; and an inspection window for permitting visual inspection of the semi-permeable test membrane; placing the semi-permeable test membrane on a fluid permeable support member; and visually monitoring fouling of the test membrane through the inspection window as an

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[indicating means] indication for determining fouling of the semi-permeable membrane in the water purification system.

In claim 36, line 3, delete “in a spiral reverse osmosis water purification system”; and before “membrane”, insert - -reverse osmosis- -; in the same claim, line 2 “particularly concerns”, and insert - -include the step of - -.

In claim 37, line 3, delete “means of a spacer means”, and insert - -spacers- -.

In claim 38 line 2, delete the terms “any suitable”, and insert - -a- -; and in line 3, delete “used in the monitoring unit”.

In claim 40, lines 1-2, delete “or passage of pure”, and insert - -of- -.

41. (Currently amended) The use of a monitoring unit including a semi-permeable test membrane for evaluating, by visual and physical inspection, one or more of the following operating parameters in a water purification system, the parameters including: [namely] the efficiency of different types of chemicals utilized in the system, the effect of using different membranes, and /or associated spacers [means] on the operating efficiency in the water purification system, [on the operating efficiency of the system], and efficiency of different membrane cleaning methods; the use including the steps of locating the monitoring in-line with the water purification system, wherein the monitoring unit comprises a flow chamber having an inlet for permitting the ingress of a feed fluid into the flow chamber, at least one fluid outlet arranged in fluid communication with the flow

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chamber for permitting the egress of fluid from the monitoring unit, and an inspection window for permitting visual inspection of the test membrane, a fluid permeable support;

placing the semi-permeable test membrane on the fluid permeable support, and effecting at least partial passage of feed fluid through the test membrane to simulate operating conditions of the water purification system in the monitoring unit.

In claim 42, line 3, delete 'spiral, and after "membrane", insert - -spiral- -; in line 12, after "steps of", insert - -locating- -, and delete "spiral membrane";

In line 13, after "chamber", insert - --;- -

In claim 45, line 3, delete "spacer means:", and insert - -spacers- -.

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: the monitoring unit, its use, in a combine system including a membrane system, as claimed in claims 1, 4, 5, 8-11, 15, 17-27, 30-31, 33-45 are not disclosed or suggested in the prior art of record. The monitoring unit including the spacers and the permeable support supporting the membrane and with the inspection window as claimed is not disclosed or suggested in the prior art of record.

The term "test membrane" has been interpreted as a membrane a membrane use in testing the fluid behavior and fouling in presence of a particular fluid, and not significant fluid separation occurs, as disclosed in the specification, e.g. see membrane area.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M. Fortuna whose telephone number is (571) 272-1141. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ana M Fortuna
Primary Examiner

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